The opinion in support of the decision being entered today was ***not*** written for publication and is ***not*** binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOHN J. LEMASTERS

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Appeal No. 2001-2201
Application 09/065,997

_____

ON BRIEF

_____

Before KRASS, FLEMING, and RUGGIERO, ***Administrative Patent Judges***.

FLEMING, ***Administrative Patent Judge***.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1, 4 through 6, 27 through 28 and 31.

The invention relates to a confocal microscope. The microscope includes a light detector, detecting pinhole and opaque circular baffles adjacent the detecting pinhole and placed in a location selected from in front of, behind or both in front of and behind the detecting pinhole. See Appellant's

specification on page 3, line 46 through page 4, line 9 and associated figures 2B-D. The diameter of the baffle is adjustable, and the position of the baffle relative to the detecting pinhole is adjustable in all dimensions. See Appellant's specification on page 4, lines 19 through 23 and associated figures 2B-D.

Independent claims 1, 4 through 6, and 27 present in the application are reproduced as follows:

1. A confocal microscope comprising a detecting pinhole and an opaque circular baffle placed in front of said detecting pinhole to block out-of-focus light and improve z-axis resolution.

4. A confocal microscope comprising a detecting pinhole and opaque circular baffles placed in a location selected from the group consisting of (a) in from of, (b) behind, and (c) both in front of and behind said detecting pinhole to block out-of-focus light and improve z-axis resolution, wherein the diameter of said baffles is adjustable.

5. A confocal microscope comprising a detecting pinhole and opaque circular baffles placed in a location selected from the group consisting of (a) in front of, (b) behind, and (c) both in front and behind said detecting pinhole to block out-of-focus light and improve z-axis resolution, wherein the position of said baffles relative to the pinhole is adjustable in all dimensions for alignment.

6. A confocal microscope comprising a detecting pinhole and opaque circular baffles placed in a location selected from the group consisting of (a) in front of, (b) behind, and (c) both in front and behind said detecting pinhole to block out-of-focus

light and improve z-axis resolution, wherein the diameter of said baffles is adjustable and wherein the position of said baffles relative to the pinhole is adjustable in all dimensions for alignment.

27. In a confocal microscope having a detection aperture and a light detector, the improvement comprising an opaque baffle positioned adjacent the detection aperture to block out-of-focus light and improve z-axis resolution.

References

The references relied on by the Examiner are as follows:

Admitted prior art (Figure 1 of Appellant's specification)

Takahashi	4,902,115	Feb. 20, 1990
Kino et al. (Kino)	4,927,254	May 22, 1990
Tanaami et al. (Tanaami)	5,579,157	Nov. 26, 1996

Rejections at Issue

Claims 1, 5, 27, 28 and 31 stand rejected under 35 U.S.C. § 103 as being unpatentable over Appellant's admitted prior art in view of Kino or Tanaami.

Claims 4 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Appellant's admitted prior art in view of Kino and Takahashi or Tanaami and Takahashi.

Rather than repeat the arguments of Appellant or the

Examiner, we make reference to the Briefs[1] and the Answer for the respective details thereof.

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of Appellant and Examiner, for the reasons stated *infra*, we reverse the Examiner's rejections of claim 1, 4 and 6 under 35 U.S.C. § 103 and affirm the rejection of claims 5, 27, 28 and 31 under 35 U.S.C. § 103.

As pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." ***In re Hiniker Co.,*** 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). In addition, claims are to be interpreted as the terms reasonably allow. ***In re Zletz***, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

Independent claim 1 recites "a confocal microscope

[1]Appellant filed an appeal brief on February 2, 2001, Paper No. 16. In response to the Examiner's Answer, Paper No. 17, mailed April 19, 2001, the Appellants filed a Reply Brief on June 21, 2001, Paper No. 18. The Examiner mailed an office communication on December 7, 2001, Paper No. 20, stating that the reply brief has been entered and considered.

comprising . . . an opaque circular baffle placed in front of said detecting pinhole[.]" Taking a reasonably broad interpretation, claim 1 requires the baffle to placed in the front of the detecting pinhole. We also note that independent claims 4 through 6 and 27 have a different scope from claim 1. These claims will be addressed separately.

Using the above interpretation, we next review the rejection of claim 1 under 35 U.S.C. § 103 as being obvious over Appellant's admitted prior art and Kino or Tanaami. The Examiner states that admitted prior art discloses all the recited elements, except for an opaque baffle positioned in front of the detection pinhole. See Examiner's Answer, Page 3, line 17 through page 4, line 1. To provide a motivation for having the opaque baffle in front of the detection pinhole of Appellant's admitted prior art, the Examiner states that both Kino and Tanaami teach placing opaque baffles in front of the detecting means in order to block unwanted stray light from reaching the detector and to improve resolution. See Examiner's Answer, page 4, lines 1 through 6.

Appellant argues that neither Kino nor Tanaami teach placing

the baffle in front of the detecting pinhole, but rather both of the references disclose the baffle located behind the pinhole. See Appeal Brief, page 4, lines 12 through 16. Additionally, Appellant asserts that there is no motivation or suggestion to move the baffles from the position taught in Kino and Tanaami to the position claimed by Appellant since Kino and Tanaami are directed to a different problem that results in the baffle on the wrong side of the pinhole. See Appeal Brief, page 5, line 10 through 12 and 16 through 20.

In rejecting claims under 35 U.S.C. §103, the Examiner bears the initial burden of establishing a *prima facie* case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ 1443, 1444 (Fed Cir. 1992). See also **In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 87 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming

forward with evidence or argument shift to the Appellant.

Oetiker, 977 F.2d at 1445, 24 USPQ at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all the evidence and arguments." **In re Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). With these principles in mind, we commence review of the pertinent evidence and arguments of Appellant and Examiner.

Upon review, we find that neither Kino nor Tanaami teach the limitation of the "baffle placed in front of the said detecting pinhole" as recited in claim 1. "It is axiomatic that, in proceedings before the PTO, claims in an application are to be given their broadest reasonable interpretation consistent with the specification . . . and that claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art." **In re Sneed**, 710 F.2d 1544, 1548,

218 USPQ 385, 388 (Fed. Cir. 1983). When reading the limitation, "in front of said detecting pinhole" in light of Appellant's specification, Page 3, lines 46 through 49 and Figure 2B of Appellant's specification describe the position of the baffle "in front of said detecting pinhole" as being located between the specimen and the pinhole. We thus find the phrase, "in front of said detecting pinhole" consistent with and in light of the specification, would be interpreted by one of ordinary skill in the art as being located between the specimen and the detecting pinhole.

On the other hand as Appellant states on page 4, lines 15 through 16 and page 5, lines 1 through 2 of the Appeal Brief, the baffles of Kino and Tanaami are located *behind* the pinhole or between the detector and the detecting pinhole as shown in Figure 2C of Appellant's specification. Tanaami shows in Figure 3 the baffle located between the detector (camera) and pinhole (21), and Kino shows in Figure 1 the baffle (7a) located between the detector (eyepiece 7) and the pinhole (3). As such, we find that neither reference teaches the limitation of being located in front of the detecting pinhole as required in claim 1.

We next turn to the rejection of independent claim 5 also

rejected under 35 U.S.C. § 103 as being unpatentable over Appellant's admitted prior art in view of Kino and Tanaami. Claim 5 has a different scope from claim 1 and recites that the baffle is "placed in a location selected from the group consisting of (a) in front of, (b) behind, and (c) both in front and behind said detecting pinhole . . ., wherein the position of said baffles relative to the pinhole is adjustable in all dimensions for alignment." As stated above and as Appellant admits, the baffle taught by Kino and Tanaami are located behind the detecting pinhole.

Appellant argues, however, that the baffles in Kino and Tanaami function to prevent stray light from reaching the detector and not "to block out-of-focus light and improve z-axis resolution" as recited in claim 5. See Appeal Brief, page 4, line 21 through page 5, line 7 and page 5, line 20 through page 6, line 6. Appellant also states that the out-of-focus light recited in the claims originates "*from the specimen and not the disk*" and does not improve z-axis resolution. See Reply Brief, page 1, lines 19 through 23. Lastly, Appellant argues that no

extrinsic evidence has been provided to demonstrate that the

baffle is inherently adjustable in all dimensions relative to the pinhole for alignment. See Appeal Brief, page 7, lines 3 through 12.

Upon review of the prior art, we sustain the rejection of claim 5. First, the Examiner cites Figure 1 (Appellant's admitted prior art) to disclose all the limitations recited in claim 1, except for the inclusion of the baffle. See Examiner's Answer, page 3, line 17 through page 4, line 1. Kino and Tanaami are then cited to provide a motivation for placing a baffle in a confocal microscope behind the pinhole. The Examiner has *only* relied on Kino and Tanaami for the general teaching of placing a baffle between the pinhole and a detector in order to avoid stray light from reaching the detector. See Examiner's Answer, page 4, lines 3 through 6. There is no discussion of relying on Appellant's admitted prior art, Kino or Tanaami to teach any additional structure. Thus, the resulting structure, based on the teachings of Kino or Tanaami, corresponds to that shown in Figure 2C of Appellant's specification. This proposed structural combination is our focus when determining whether the Examiner has established a *prima facie* case of obviousness.

Second, it is not required that the Examiner show that the

motivation to make the modification is the same motivation as Appellant's. In **In re Kemps**, 97 F.3d 1427, 1430, 40 USPQ2d 1309, 1311 (Fed. Cir. 1996) citing **In re Dillon**, 919 F.2d 688, 693, 16 USPQ2d 1897, 1901 (Fed. Cir. 1990) (en banc), our reviewing court states:

> [a]lthough the motivation to combine here differs from that of the applicant, the motivation in the prior art to combine the references does not have to be identical to that of the applicant to establish obviousness.

As such, the Examiner has cited column 2, lines 20 through 24 of Tanaami and column 3, line 65 through column 4, line 4 of Kino to teach including a baffle behind a pinhole of a confocal microscope in order to reduce stray light. More importantly, Appellant has not demonstrated why one skilled in the art would not have been motivated to use the teachings of Kino and Tanaami with the Appellant's admitted prior art. Rather, Appellant has focused his arguments on the different reasons why Appellant and the Kino and Tanaami references have the baffle behind the pinhole.

Additionally, Appellant admits on page 3, lines 46 through page 4, line 3 and associated Figure 2C of Appellant's specification, that placement of a baffle behind the pinhole blocks out-of-focus light and improve z-axis resolution. As

discussed above, Kino and Tanaami also teach placing the baffle behind the pinhole. Therefore since Kino and Tanaami teach placing the baffle behind a detecting pinhole, these baffles, while reducing stray light, also will function to block out-of-focus light and thus improve z-axis resolution as recited in claim 5.

Finally, the Examiner's statement that the baffles of Kino and Tanaami are adjusted "at some point" to be aligned with the optical axis in order to function properly to screen out stray light is persuasive. See Examiner's Answer, page 4, lines 7 through 10. In order for the baffle to function properly to screen out stray light as taught by Kino and Tanaami, the baffle must be adjustable until the proper position or alignment of the baffle to reduce stray light is determined. Additionally, Appellant's specification on page 4, lines 21 through 23 do not provide any particular structure used to describe how the baffle is adjustable in all dimensions for alignment. As such, the Examiner has presented the requisite factual findings that "the position of said baffles relative to the pinhole is adjustable in all dimensions for alignment" as recited in claim 5. We thus

sustain the Examiner's rejection of claim 5 under 35 U.S.C. § 103.

We next address the rejection of independent claim 27 under 35 U.S.C. § 103 as being unpatentable over Appellant's admitted prior art in view of Kino or Tanaami. Claim 27 also has a different scope from independent claims 1 and 5 and recites "an opaque baffle positioned adjacent the detection aperture." Taking a reasonably broad interpretation of the claim, claim 27 requires the baffle to be adjacent or nearby the baffle.

The Examiner states that Kino and Tanaami teach positioning a baffle adjacent the detection aperture in order to screen out stray light and thus improve resolution. See Examiner's Answer, page 4, lines 3 through 6. Appellant argues that Kino and Tanaami teach placing the baffle adjacent relay lens or the eye piece, respectively, and not adjacent the detection aperture. See Appeal Brief, page 4, lines 16 through 18.

Upon review, we find that Kino and Tanaami teach placing a baffle adjacent or nearby the detection pinhole. The Examiner cites Kino and Tanaami only to provide a motivation for one of ordinary skill in the art to include a baffle behind a detecting pinhole of a confocal microscope and not to incorporate other features of the Kino and Tanaami device into the Appellant's

admitted prior art. As such, the proximity of the baffles in Kino and Tanaami relative to the relay lens or an eye piece is immaterial. Additionally, we refer Appellant to the above discussion regarding teaching the limitation, "to block out-of-focus light and improve z-axis resolution" found in claim 27.

Appellant has grouped claims 28 and 31 with claim 27 and has not presented separate arguments. See Appel Brief, page 3, lines 11-12 and page 6, lines 16-19. As such, we also sustain the rejection of claims 28 and 31 under 35 U.S.C. § 103.

We finally turn to the rejection of claims 4 and 6 under 35 U.S.C. § 103 as being unpatentable over Appellant's admitted prior art in view of Kino and Takahashi or Tanaami and Takahashi. The Examiner cites Takahashi to teach the limitations, "the diameter of the baffles is adjustable" found in claims 4 and 6. To provide a motivation to combine the references, the Examiner states that "[i]t would have been obvious at the time of [the] invention to use such a baffle with [an] adjustable diameter in the above discussed combination of prior art teachings in order to provide the user with active control over the amount of light reaching various portions of the detector." See Examiner's Answer, page 4, line 18 through page 5, line 2. Appellant argues

that one skilled in the art would not have been motivated to combine Takahashi with the other references since Takahashi is "unrelated to microscope performance with relation to axial resolution. The Takahashi device changes the f-stop of the camera system to keep brightness constant and to increase depth of field during close focussing." See Appeal Brief, page 8, lines 3 through 5.

Upon careful review, we are persuaded that there is no motivation in Takahashi to combine its teachings with Kino or Tanaami. The adjustable baffle of Takahashi is used in thin fiber optical systems to provide a wider observation range and brighter images. See Takahashi, Column 2, lines 30 through 68. There is no suggestion in Takahashi to apply its teachings to a confocal microscopic environment or that the teachings are reasonably pertinent to assist in solving the problem of blocking out-of-focus light with which Appellant was concerned. As such, we fail to find that the Examiner has presented the requisite findings or reasons in Takahashi for one skilled to combine its teachings with Appellant's admitted prior art and Kino or Tanaami in order to provide the user with active control over the amount of light reaching the detector as the Examiner suggests.

In conclusion, we sustain the rejection of claims 5 and 27-28 and 31. We cannot sustain the rejection of claims 1, 4 and 6 under 35 U.S.C. § 103.

AFFIRMED-IN-PART

ERROL A. KRASS Administrative Patent Judge	)	
MICHAEL R. FLEMING Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JOSEPH F. RUGGIERO Administrative Patent Judge	)	

MRF:pgg

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